2012 APPENDIX B BUILDING CODE SUMMARY

Name of Project:	HAYWOOD COUNTY BULK SALT STORAGE BUILDING		
Address:			
Proposed Use:	SALT STORAGE		
Owner or Authorize	d Agent: <u>NCDOT, FACILITIES MANAGEMENT DIV.</u>	. Phone # .	919-707-4540
Owned By: STATE O	F NORTH CAROLINA City/County	□Privat	te 🛛 State
Code Enforcement	Jurisdiction: City	Coun	ty <u>HAYWOOD</u>

DESIGNER FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural				
SITE "Civil"				
Electrical				
Fire Alarm				
Plumbing				
Mechanical				
Sprinkler-Standpipe				
Structural NCDOT	MICHAEL MOUNTCASTL	E 17326	(919)707-4547	mdmountcastle@ncdot.gov
Retaining Walls >5' High				

2012 EDITION OF NC CODE FOR:	New Construction ■	☐ Addition	☐ Upfit
EXISTING: □Reconstruction	☐ Alteration	Repair	
CONSTRUCTED	ORIGINAL USE	RENOVATED	CURRENT USE

Construction 1	Гуре:	□ I-A	□ II–A	. 🔲 III—A	□№	□ V-A	
		□ I-B	□ II-E	B □ III−B		⊠ ∨–в	
	Mixed	construction:	☑ No	☐ Yes	Types		
Sprinklers:	X No	□ Partial	□Yes	□NFPA ¹	3 □ NFPA	13R	□NFPA 13D
Standpipes:	X No	☐Yes Cl	ass 🗌 I		☐ Wet	☐ Dry	
Fire District:	⊠ No	☐Yes		Flood Hazard	Area: 🛛 No	□Yes	
Building Heigh	t: Feet	34 ¹ -0 [#]	_ Num	ber of Stories_	1		
Mezzanine:	☑ No	☐Yes					
Gross Building	Area:						
FLOOR		EXISTING	(SQ FT)	NE	W (SQ FT)		SUB-TOTAL

		ALLO	WABLE AREA		
Primary Occupancy:	☐ Assembly	□ A-1	□ A-2	□ A-3	□ A-4 □ A-5
☐ Business	☐ Educational	Factory	☐ F—1 Moderate	☐ F-2 Low	
Hazardous	☐ H−1 Detonate	☐ H-2 Deflagre	ate 🗌 H–3 Combust	☐ H-4	Health ☐ H-5 HPM
Institutional	☐ I-1	□ I–2	□ I–3	□ I-4	
	I-3 Condition	□ 1	□ 2 □ 3	□4 □ 5	
☐ Mercantile	Residential	□ R-1	□ R-2 □ R-3	□ R-4	
Storage 🔲	S-1 Moderate	☐ S-2 Low	☐ High-piled		
Utility and M	iscellaneous 🔲	Parking Garage	☐ Open	☐ Enclosed	☐ Repair Garage
Mixed Occupancy:	⊠ No	☐ Yes	Separation: ——— Hr.		Exception:

story no.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) Table 503 Area	(C) AREA FOR OPEN SPACE INCREASE ¹	(D) AREA FOR SPRINKLER INCREASE ²	(E) Allowable Area or Unlimited ³	(F) Maximum Building Area ⁴
1	UTILITY	3200 SF	5500	N/A	N/A	5500	5500
	-		-				

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type V-B		Type V-B	602.5
Building height in feet	Feet 40 ¹	Feet=H+20'= N/A	Feet 341-011	503
Building Height in Stories	Stories 1	Stories+1= N/A	Stories 1	503
	-	-	-	-

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	REQ'D	RATING PROVIDED (W/*	Detail # And Sheet #	DESIGN # FOR RATED	Design # For Rated Penetration	DESIGN # FOR RATED
Structural frame, including columns, girders, trusses	>IO ₁	o	REDUCTION)	-	ASSEMBLY		JOINTS
Bearing walls Exterior)IOI	0	0				
Interior Walls and partitions	-	-	-				
Roof construction Including supporting beams and joist	>IOI	0	o				
Shaft Enclosures—Exit	-	-	-				
Shaft Enclosures—Other	-	-	-				
Corridor Separation	1	1	-				
Occupancy Separation	-	-	-				
Party/Fire Wall Separation	-	1	-	·			
Smoke Barrier Separation	-	-	-				
Tenant Separation	-	-	-				
ncidental Use Separation	1	1	-				
Fire Barrier	-	-	-				

LICE	CAFETY	CVCTEM	DECLUDEN	_

LIFE S	SAFETY SYSTEM	REQUIREME
Emergency Lighting:	IX NO	☐YES
Exit Signs:	⊠ NO	☐YES
Fire Alarm:	⊠ NO	☐YES
Smoke Detection Syst	ems: 🛛 NO	☐YES
Panic Hardware:	⊠ NO	☐YES

		exi Number and	T REQUIREMENTS O ARRANGEMENT OF	EXITS N/A		
FLOOR, ROOM OR	MINIMU NUMBER O		TRAVEL DISTANCE		EGRESS (SI ARRANGEMENT	ECTION 1014.2) MEANS OF ^{1,3}
SPACE DESIGNATION	REQUIRED	SHOWN ON PLANS	ALLOWABLE TRAVEL DISTANCE (TABLE 1016.1)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	required Distance Between Exit Doors	ACTUAL DISTANCE SHOWN ON PLANS
	N/A					

Corridor dead ends (Section 1018.4) Buildings with single exits (Table 1021.2), Spaces with one means of egress (Table 1015.1) Common Path of Travel (Section 1004.1.1)

USE GROUP	(A)	(B)			(C)		EXIT WIDTH	(in) ^{2,3,4,5}	5,6
OR SPACE DESCRIPTION	AREA 1 SQ. FT.	AREA 1 PER OCCUPANT (TABLE CALCULATED OCCUPANT LOAD		PER C	S WIDTH CCUPANT 1005.1)		ED WIDTH N 1005.1) -b)xc	ACTUA	l width On Plans
		1004.1.1)		STAIR	LEVEL	STAIR	LEVEL	STAIR	LEVEL
						N/A	N/A		

STRUCTURAL DESIGN

Importance Factors:	Wind (I w)
	Snow (I _S) 1.0
	Seismic (I _E) 1.0
Live Loads:	Roof <u>20</u> psf Ext. Deck <u>N/A</u> psf
	Mezzanine NA psf Attic Floor N/A psf
	Floor <u>800</u> psf
Ground Snow Load: .	<u>15</u> pef
Wind Load:	Basic Wind Speed mph (ASCE-7)
	Exposure CategoryB
	Wind Base Shears (for MWFRS) $Vx = 15.7 \text{ k}$ $Vy = 31.4 \text{ k}$
SEISMIC DESIGN CATE	GORY □A □B ⊠C □D
Provide the following	Seismic Design Parameters:
Provide the following Occupancy Ca	
Provide the following Occupancy Ca Spectral Respo	Seismic Design Parameters: ategory (Table 1604.5)
Provide the following Occupancy Ca Spectral Respo Site Classifica	Seismic Design Parameters: ategory (Table 1604.5)
Provide the following Occupancy Ca Spectral Responsite Classifica Basic structure X	Seismic Design Parameters:
Provide the following Occupancy Ca Spectral Responsite Classifica Basic structure X	Seismic Design Parameters: Seismic Design
Provide the following Occupancy Ca Spectral Responsite Classifica Basic structure X	Seismic Design Parameters: Seismic Design Parameters:
Provide the following Occupancy Ca Spectral Responsite Classificate Basic structure X Seismic base shear	Seismic Design Parameters: Integory (Table 1604.5)
Provide the following Occupancy Ca Spectral Responsite Classificate Basic structure X Seismic base shear Analysis Procedure	Seismic Design Parameters: Integory (Table 1604.5)
Provide the following Occupancy Ca Spectral Responsite Classificate Basic structure X Seismic base shear Analysis Procedure	Seismic Design Parameters: Integory (Table 1604.5)
Provide the following Occupancy Ca Spectral Responsite Classificate Basic structure X Seismic base shear Analysis Procedure	Seismic Design Parameters: Stegory (Table 1604.5)

PLUMBING FIXTURE RE	N/A							
USE		_OSETS	URINALS	LAVATORIES		SHOWERS/	DRINKING	FOUNTAINS
	MALE	FEMALE		MALE	FEMALE	TUBS	REGULAR	ACCESSIBLE
EXISTING								
NEW-SHOWN								
required N/A								

Pile size, type, and capacity

	MALE	FEMALE	MALE	FEMALE	IOBO	REGULAR	ACCESSIBLE
EXISTING							
NEW-SHOWN							
required N/A							

	ACCESSI	BLE PARKING / E	XISTING PARKING N/	4	
LOT OR PARKING	TOTAL# OF PARKIN	G SPACES	# OF ACCESSIBLE S	ACCESSIBLE	
AREA	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	PROVIDED TOTAL #
CARS					
TOTAL					

SPECIAL APPROVALS: N/A

ENERGY SUMMARY N/A

The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If energy cost budget method, state the annual energy cost budget vs allowable annual energy cost budget. THERMAL ENVELOPE

Method of Compliance:
☐ Prescriptive ☐ Performance ☐ Energy Cost Budget Climate Zone: Heating Degree days (base Cooling Degree days (base

Building Type:

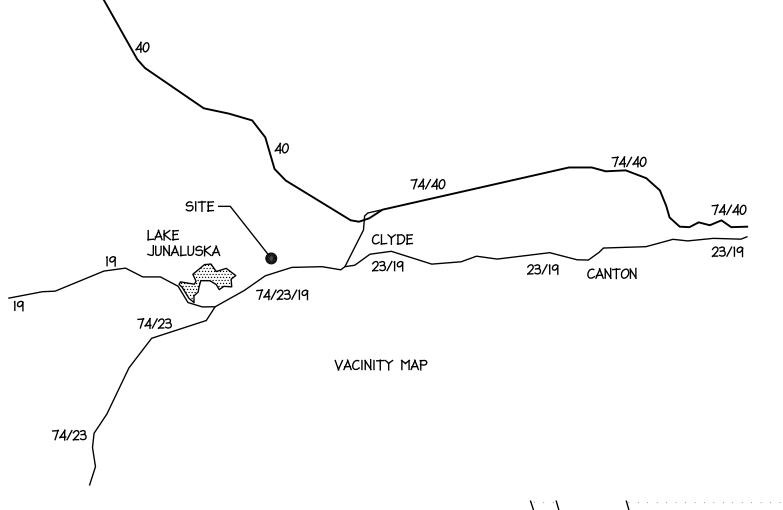
Vertical Glazing/Wall Area Pct.:

Project Type:

ELECTRICAL SUMMARY: N/A

MECHANICAL SUMMARY: N/A

HAYWOOD COUNTY BULK SALT STORAGE BUILDING



ASPHALT

BLDG

TREES

SALT SHED-

EXIST PANEL "A" IN STORAGE BLDG —

METER -

SPOT ELEVATIONS AT BLDG CORNERS -

NEW BULK SALT

NO WATERCOURSE OR 100 YEAR FLOODPLAIN AS MAPPED

BY FEMA OR AS DEFINED BY ANY FEDERAL, STATE, OR

LOCAL AUTHORITY IS LOCATED ON THIS PROPERTY.

STORAGE BUILDING -

FENCE & PROPERTY LINE

STORAGE BLDG -

BRINE CONTAINMENT -

NORTH

UG BRANCH CIRCUITS TO NEW BUILDING BY OWNER - NCDOT HIGHWAY DIVISION 14 619 PARAGON PARKWAY **CLYDE, NC 28721** SCO ID. NO.: 15-12494-01A

GRASS

GRASS

FINISHED FLOOR $ELEV = 2653.64^{\circ}$

INDEX OF DRAWINGS

- TI TITLE SHEET & CODE SUMMARY FOUNDATION PLAN & DETAILS
- 52 ROOF FRAMING PLAN & DETAILS

OFFICE BUILDING

53 ELEVATIONS, DETAILS & GEN NOTES

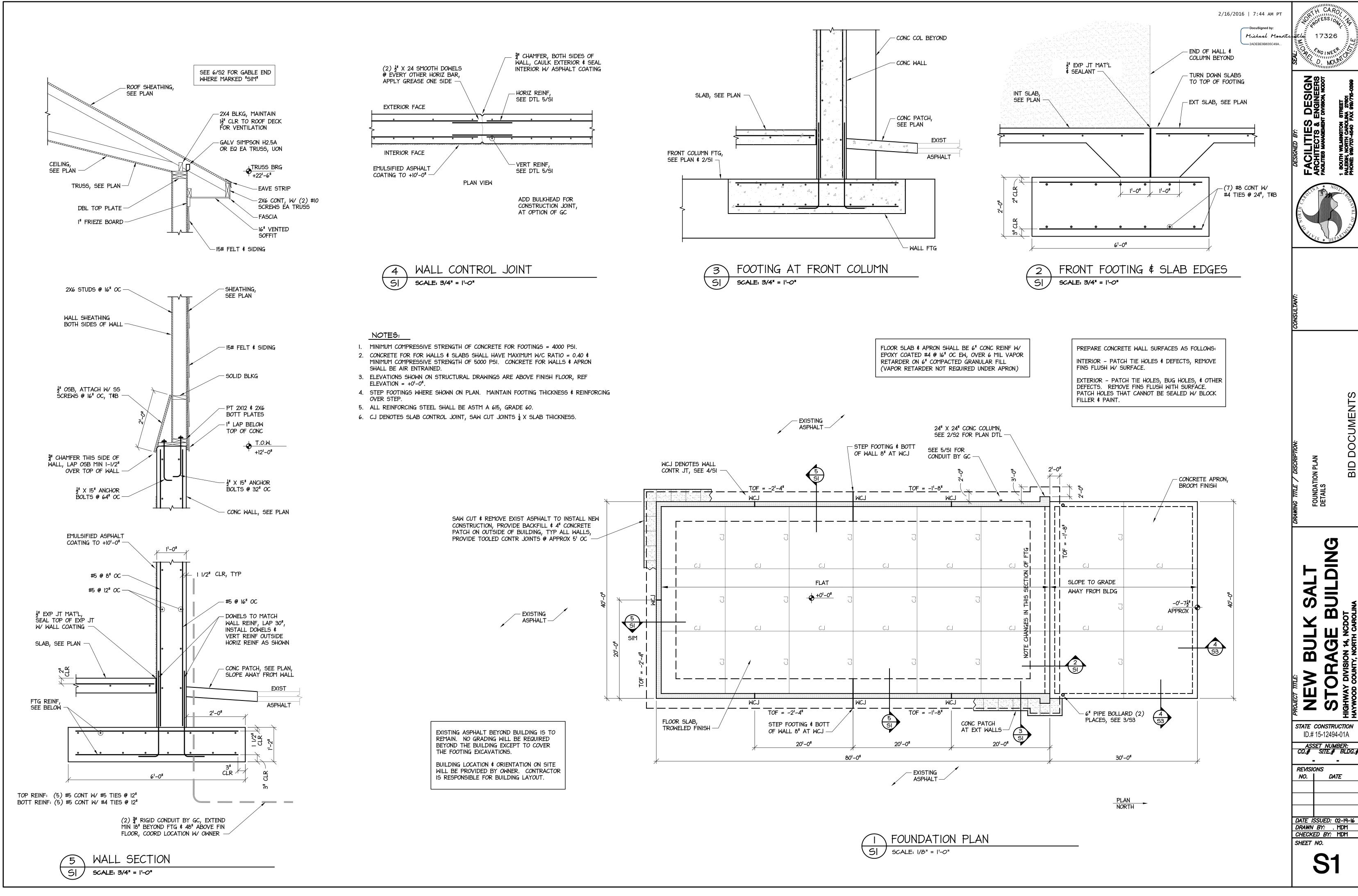


GRASS

STATE CONSTRUCTION ID.# 15-12494-01A

NO. DATE DATE ISSUED: 02-19-16 DRAWN BY: . MDM CHECKED BY: MDM

PARTIAL SITE LAYOUT



D. MOUN

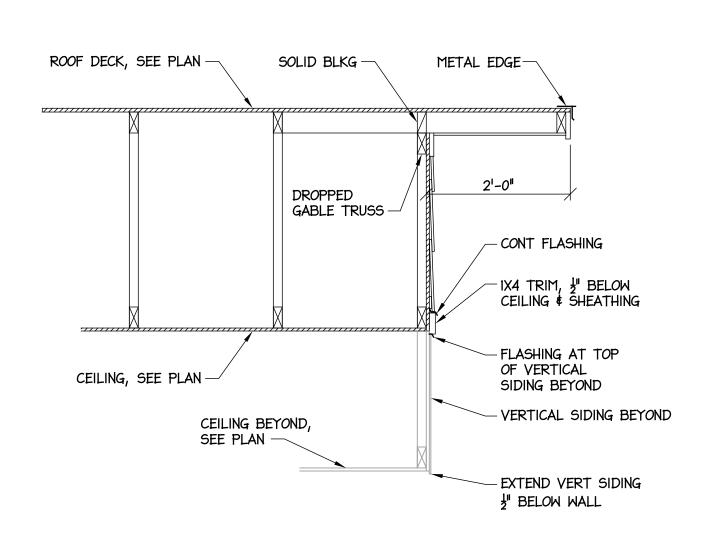
OILDING

STATE CONSTRUCTION ID.# 15-12494-01A ASSET NUMBER: CO.# SITE.# BLDG.;

DATE

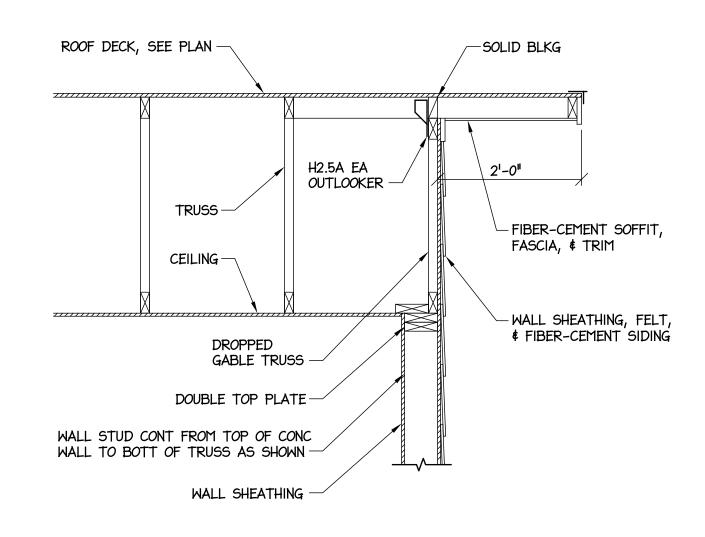
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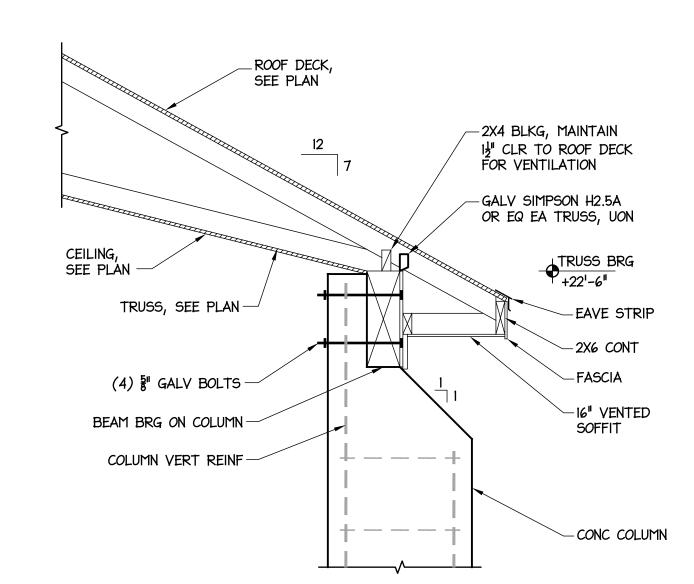


GABLE FRAMING FRONT WALL

SCALE: 3/4" = 1'-0"



GABLE FRAMING REAR WALL SCALE: 3/4" = 1'-0"



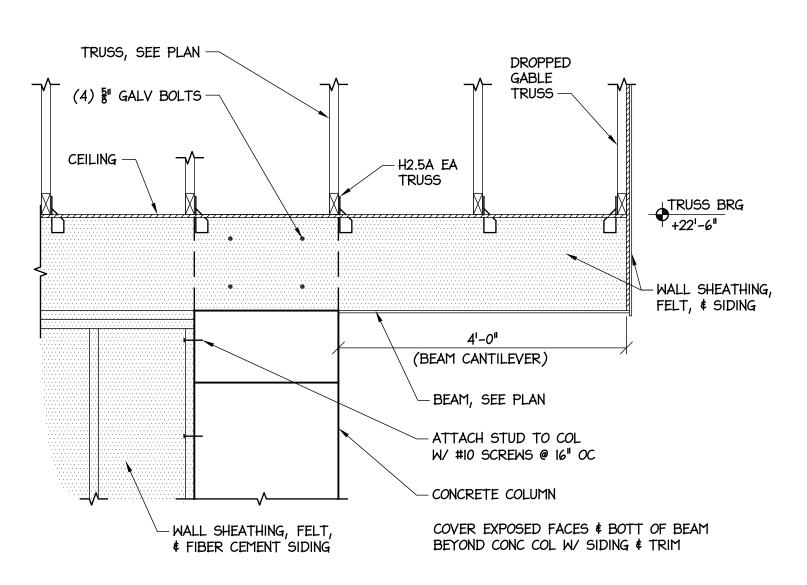
TRUSS BEARING ON COLUMN SCALE: 3/4" = 1'-0"

TRUSS, SEE PLAN — CEILING -BEAM, SEE PLAN TRUSS BRG - DBL TOP PLATE -STUDS, SEE PLAN - APPLY FULL PANEL OF WALL SHEATHING AS SHOWN BY SHADING, BOTH SIDES OF WALL

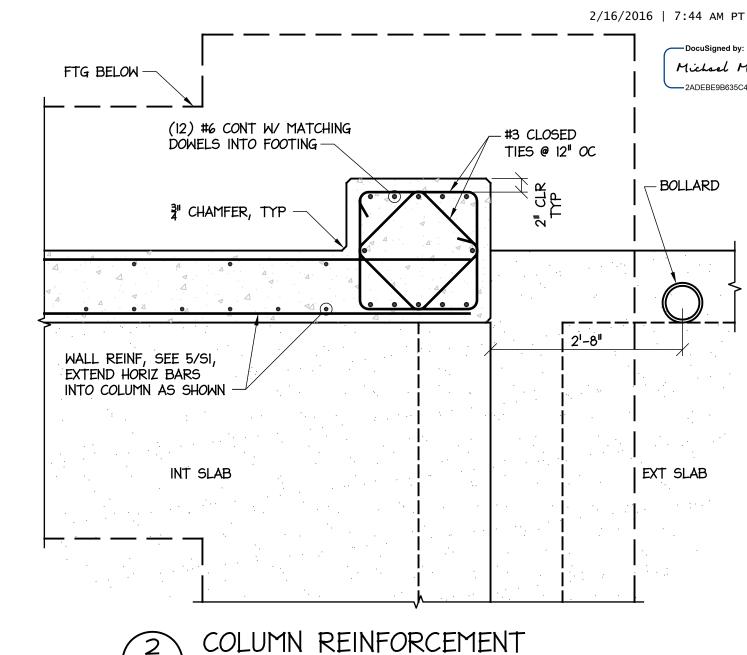
BEAM BEARING AT BACKSPAN SCALE: 3/4" = 1'-0"

NOTES:

- PROVIDE TRUSS SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NC, SHOWING TRUSS LAYOUT, TRUSS DESIGNS, & REQUIRED BRACING.
- 2. SEE 2/S3 FOR TRUSS PROFILE.
- 3. ROOF SHEATING SHALL BE 盟 PLYWOOD OR OSB, ATTACHED W/ 10D NAILS @ 4" OC ALONG PANEL EDGES \$ 8" OC ALONG INTERIOR SUPPORTS.
- 4. PROVIDE CONT RIDGE VENT ON ROOF.
- 5. CEILING SHALL BE 7" OSB ATTACHED TO BOTTOM CHORD OF TRUSSES W/ 8D NAILS @ 6" OC ON PANEL EDGES \$ 12" OC ALONG INTERIOR SUPPORTS.
- 6. SIMPSON STRONG TIE CONNECTORS ARE SHOWN. CONNECTORS W/ EQUAL STRENGTH ₺ CORROSION RESISTANCE FROM OTHER MFR'S ARE ACCEPTABLE.



CANTILEVERED BEAM END SCALE: 3/4" = 1'-0"



PLAN NORTH

\S2*]*

SCALE: 3/4" = 1'-0"

CONC COLUMN, SEE 5/S2 FOR TOP OF COLUMN DTL ROOF TRUSSES @ 24" OC-80'-0" 5½" X 16" X 16' GLULAM BEAM, BALANCED & PRESSURE TREATED TRUSS BRG = $+22^{1}-6^{11}$ - 2X4 @ 16" OC OUTLOOKERS WOOD STUDS SHALL BE CONT AT REAR WALL (BALLOON FRAMED) -22^{11}_{2} X 36" CEILING ACCESS - 5½" X 16" X 16' GLULAM BEAM, BALANCED & PRESSURE TREATED TRUSS BRG = $+22^{1}-6^{11}$ LIGHTS BY OWNER -5

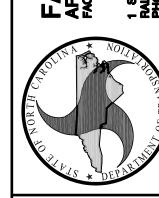
ROOF FRAMING PLAN

SCALE: 1/8" = 1'-0"

D. MOUN!

ENGINEERS FINANCE NO POLITICAL PARAGET

FACILITIES
ARCHITECTS & E



UILDING SAL BULK

STATE CONSTRUCTION ID.# 15-12494-01A ASSET NUMBER: CO.# SITE.# BLDG.#

REVISIONS NO. DATE

DATE ISSUED: 02-19-16
DRAWN BY: . MDM
CHECKED BY: MDM SHEET NO.

S2

- 1. See specifications for further information. in case of conflict between specifications & drawings, contact architect for resolution.
- 2. Contractor is responsible for coordination & distribution of all changes in contract documents to all subcontractors.
- 3. Contractor shall verify all field conditions, elevations, & dimensions prior to construction. Do not scale from plans.
- 4. Means & methods of construction, including temporary bracing, shoring, & jobsite safety, are the responsibility of the contractor.
- 5. Structural frame shall be braced until erection is complete & permanent connections & bracing are installed.
- 6. Provide silt fence or other erosion & sediment control measures as required.
- 7. If demolition is included in project, sawcut all edges of existing slab and asphalt to remain adjacent to new construction.
- B. FOUNDATION
- 1. Footing excavations shall be reviewed by a geotechnical engineer or construction testing agency approved by the architect or engineer.
- 2. Footing depths shown are based on geotechnical investigation or presumptive soil properties. Soft or unsuitable soils shall be removed & replaced with suitable fill as specified.
- 3. Under slabs & footings, remove all topsoil, trash, & organic material, & replace with select fill compacted to 95% maximum density as measured by the Standard Proctor Method (ASTM 698) in 12 inch maximum lifts. The top 12" shall be compacted to 98% maximum density.
- 4. Contractor is responsible for shoring while excavating near existing structures.

C. CONCRETE

- 1. Compressive strength of concrete shall be 3000 psi for footings & 4000 psi for walls and slabs, unless otherwise noted.
- 2. Coordinate floor slopes and depressions with arch and plumbing plans. Maintain specified slab thickness below depressed or sloped areas.
- 3. If not specified on plans, provide sawed slab control joints in slabs on grade spaced at not more than 48 times the slab thickness.
- 4. Reinforcing steel shall meet ASTM A 615, Grade 60.
- 5. Welded wire reinforcement shall conform to ASTM A 185 & A 82.
- 6. Grout under all columns & beam bearing plates with non-shrink, non-metallic
- grout which meets ASTM C 1107.
- 7. Clear distance from face of concrete to main reinforcing:

Suspended slabs and joists: Grade beams, pedestals, columns, walls:

Footings & walls cast against earth:

- 8. Provide (2) #4 x 48" diagonal corner bars at center of slab at all corners of
- 9. Lap all reinforcement splices 48 bar diameters. UON.
- 10. Detailing, fabrication, & installation of reinforcing steel shall conform to ACI "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI
- 11. Workmanship, tolerances, & concrete placement shall conform to "Standard Specifications for Structural Concrete" (ACI 301).
- 12. Chamfer exposed edges of concrete 3/4", UON.
- 13. Anchor bolts shall conform to ASTM F 1554, Grade 36.
- 14. Provide hard hard steel trowel finish on slabs, then brush lightly for nonskid finish.

D. STRUCTURAL STEEL

1. Structural steel shall conform to ASTM A 572 except: round pipe shall be A 53, Grade B; square and rectangular tube shall be A 500, Grade B.

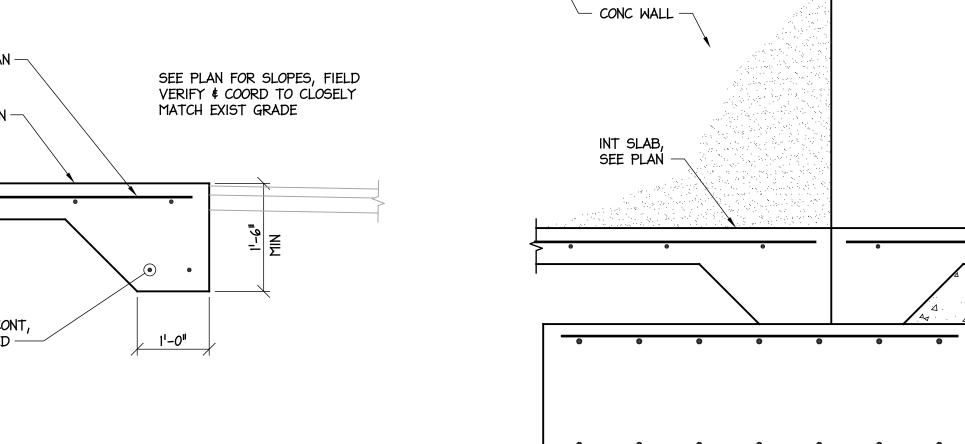
F. WOOD

- 1. Structural lumber shall be SPF #2 or better, UON. Wood for fabricated trusses shall be SYP #2 or better, except that webs may be SYP #3.
- 2. Wood in contact with concrete or masonry shall be treated.

bracing. Bracing design is the truss designer's responsibility.

- 3. Straps, ties, hangers, & other connection hardware shall be galvanized.
- 4. Connections not otherwise detailed shall be in accordance with Tables 2304.9.1.1 thru 2304.9.1.6 of the NC State Building Code.
- 5. Trusses shall be designed for the full dead & live loads specified in the contract. Submit truss shop drawings bearing the seal of a registered professional engineer licensed in the state of NC. Show truss layout & truss designs including required
- 6. Contractor shall install both temporary and permanent bracing. Note that permanent bracing is often shown on individual truss calculation pages instead of the truss layout sheet, especially where there is no hard ceiling applied to truss.
- 7. Additional bracing may be required by engineer of record as indicated on plans for support of gable walls or other items.
- 8. Install blocking in walls & ceiling where required for partitions, fixtures, & other misc items. Coordinate with all trades.

REINF, SEE PLAN -SEE PLAN FOR SLOPES, FIELD VERIFY & COORD TO CLOSELY MATCH EXIST GRADE SLAB, SEE PLAN-(2) #4 CONT, 1'-0" UNCOATED



SCALE: 3/4" = 1'-0"

NOTES:

CONC FILL W/

CROWNED TOP

PAINT BOLLARDS

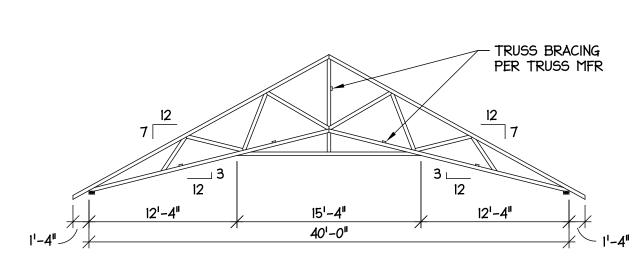
SAFETY YELLOW

─ 6^{II} MIN CONC

COVER

1. HEEL HEIGHT & WEB CONFIGURATION BY TRUSS MFR.

2. UNLESS OTHERWISE REQUIRED BY TRUSS MFR, TRUSS BRACING SHALL BE 2X4 NAILED TO EACH TRUSS W/ (2) I6D NAILS. LAP SPLICES OVER TWO TRUSSES.



TRUSS PROFILE SCALE: 1/8" = 1'-0"

NOTES:

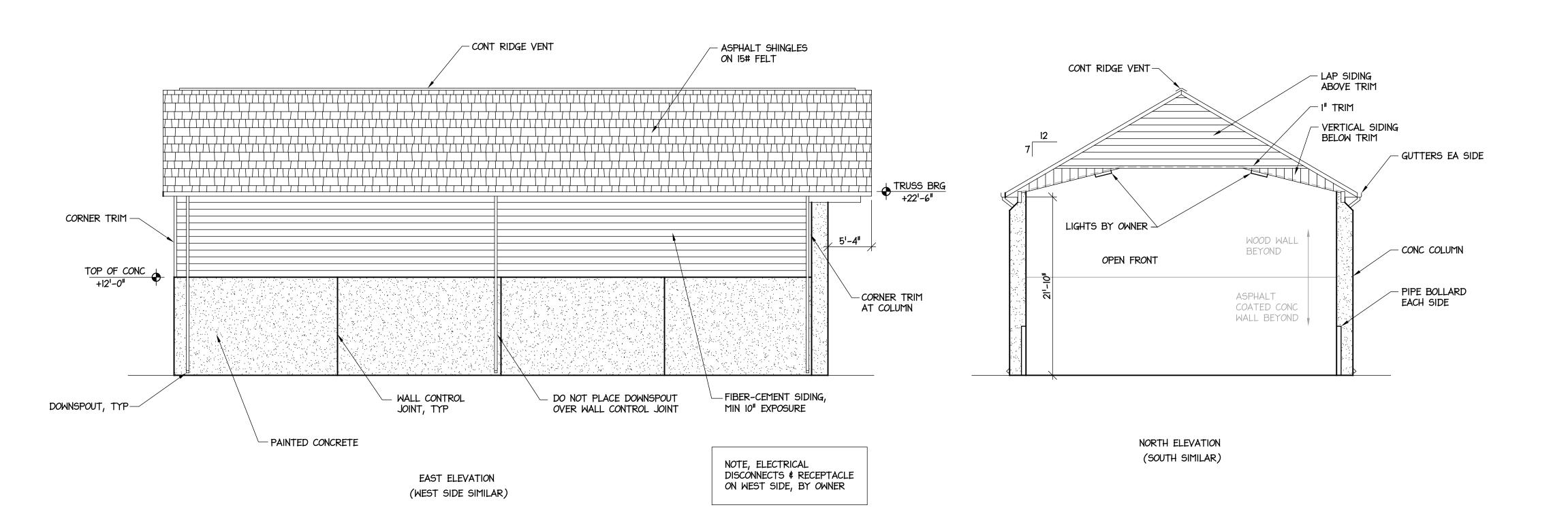
1. SIDING, SOFFIT, FASCIA, & TRIM SHALL BE PRE-PRIMED FIBER-CEMENT BOARD. PROVIDE SAMPLES FOR SELECTION BY OWNER.

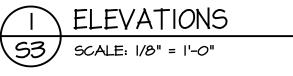
EXTERIOR SLAB EDGE

SCALE: 3/4" = 1'-0"

- 2. ROOFING SHALL BE ARCHITECTURAL STYLE ASPHALT SHINGLES OVER 15# FELT. PROVIDE COLOR SAMPLES FOR SELECTION BY OWNER.
- 3. INSTALL ALL ROOFING, SIDING, & OTHER FINISHES IN ACCORDANCE W/ MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 4. MAXIMUM BUILDING STORAGE CAPACITY IS APPROXIMATELY 1650 TONS OF

5. PROVIDE SPLASH BLOCKS AT ALL DOWNSPOUTS.

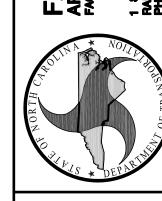




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DocuSigned by

DESIGN ENGINEERS



S

STATE CONSTRUCTION ID.# 15-12494-01A

REVISIONS NO. DATE DATE ISSUED: 02-19-16 DRAWN BY: . MDM

CHECKED BY: MDM SHEET NO.

S3